

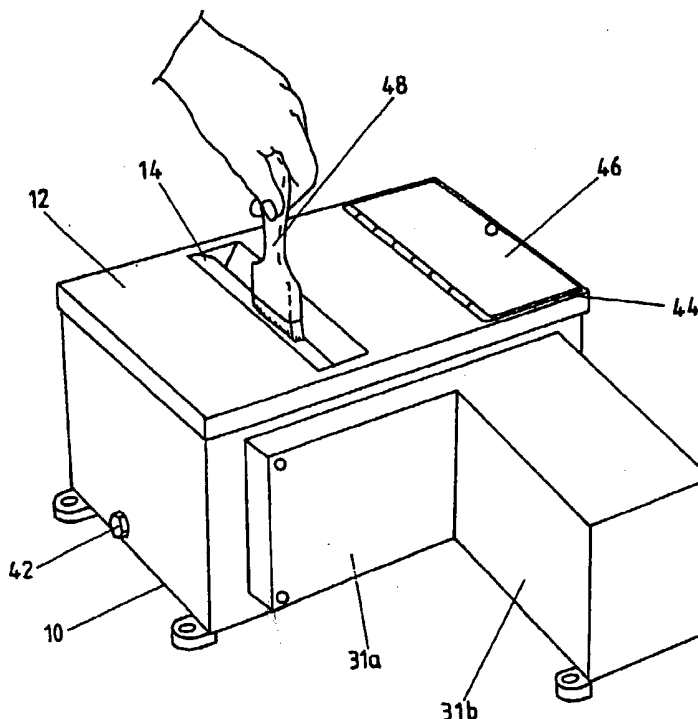


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(54) Title: PAINT BRUSH CLEANER**(57) Abstract**

A cleaning apparatus for paint brushes, comprising a container (10) in which at least one cleaning brush or roller (24, 25) is mounted, an opening (14) for inserting a paint brush (48) to be cleaned, and either an integral electric drive motor or a handle (32) in addition to a coupling (36) for an electric drill to rotate the cleaning brush or roller (24, 25). The paint brush (48) to be cleaned is inserted through the opening (14) to contact the rotating cleaning brush or roller (24, 25). The container (10) can contain a cleaning liquid such as turpentine, white spirit or thinners to a level sufficient to immerse the cleaning brush or roller (24, 25) at least partly.



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PAINT BRUSH CLEANER

This invention relates to a cleaning apparatus for paint brushes.

Often it is difficult or impossible to clean paint brushes on which the paint has dried. I have now devised a cleaning apparatus which may be used to clean such brushes or to clean brushes which have been recently used.

In accordance with this invention, a cleaning apparatus for paint brushes is characterised by a container in which at least one cleaning brush or roller is mounted, an opening for inserting a paint brush to be cleaned, and means for rotating the cleaning brush or roller so as to clean a paint brush when inserted through the opening to contact the cleaning brush or roller.

Preferably an integral electric drive motor is provided for rotating the cleaning brush or roller. Alternatively a handle may be provided to enable the cleaning brush or roller to be driven by hand and/or a coupling may be provided to enable the brush to be driven by an electric motor.

Preferably the container is provided with a cover having a slot in it through which a paint brush to be cleaned may be inserted.

In use, a cleaning liquid such as turpentine, white spirit or thinners would be present in the container to a level sufficient to immerse the cleaning brush or roller at least partly. Preferably the container is provided with a drain point through which contaminated cleaning liquid can be drained when desired.

Preferably there are two contra-rotating cleaning brushes or rollers within the container and the paint brush is inserted into the nip between these. Instead, there may be a single cleaning brush or roller and a reaction member urged e.g. spring loaded towards the cleaning brush or roller: the paint

brush is inserted between the brush or roller and the reaction member and taken out and re-inserted the other way after one side is cleaned.

Preferably the container includes a separate compartment, also for holding cleaning liquid, in which paint brushes can soak.

An embodiment of this invention will now be described by way of example only and with reference to the accompanying drawings, in which:

FIGURE 1 is a view of a paint brush cleaning apparatus having an integral electric drive motor; and

FIGURE 2 is an exploded view of a modified cleaning apparatus showing its component parts.

Referring to the drawings, there is shown a paint brush cleaning apparatus, which comprises a container 10 having a removable lid 12 which is formed with a transverse slot 14 normally closed by two downwardly inclined flexible shields 16, 17. The container 10 is divided into a main compartment 18 and a smaller compartment 20 by an internal wall 22. A pair of rotary brushes 24, 25 are mounted side by side within the main compartment 18, each brush having its elongate shaft 25, 27 journaled in the opposite side walls of the container 10. Each brush has an array of bristles projecting radially outwards from its shaft 26, 27 and the two brushes co-operate to define a nip between them which is directly below the slot 14 in the lid.

The shafts of the two brushes 24, 25 extend through one side wall of the container 10, and meshing gear wheels 28, 29 are coupled to these projecting ends of the brush shafts. A gear wheel 34 is also mounted to the side of the container to mesh with the gear wheel 29 and its drive stem 36 is either directly connected to integral electric motor inside cover 31b (Figure 1) or it projects through the cover plate 31 to allow the chuck of an electric drill to be connected. In the latter case, and as shown in Figure 2, a bracket 38 projects from the container and includes a collar 40 for closing around the body

of the electric drill when the chuck of this is tightened onto the drive stem 36.

In use, cleaning liquid is introduced into the main compartment 18 of the container 10 to a level at least partially immersing the brushes 24, 25. This cleaning liquid may be poured through the slot 14 in the lid 12. A paint brush 48 to be cleaned is inserted through the slot 14 and into the nip between the two cleaning brushes 24, 25. These two brushes are then rotated by the integral electric motor of the apparatus shown in Figure 1 or by hand 32 or by an electric drill in the cases of the apparatus in Figure 2.

The cleaning brushes are rotated in opposite directions, the bristles of the two cleaning brushes moving down to the paint brush from its handle towards the free end of its bristles.

The container 10 is provided with a drain plug 42 in one of its end walls for draining contaminated cleaning liquid from the main compartment 18.

The smaller compartment 20 serves for soaking brushes and in use holds cleaning liquid, the brushes to be soaked being introduced through an aperture 44 in the lid, which aperture is provided with a hinged cover 46.

Also as mentioned previously, there may be only one cleaning brush or roller, turned manually by the handle 32 or by an electric drill or by an integral drive motor of the apparatus. In this case a reaction member is urged e.g. spring loaded towards the single cleaning brush or roller: the paint brush is inserted between the brush or roller and the reaction member and is removed, turned round and re-inserted after one side is cleaned.

CLAIMS

- 1) A cleaning apparatus for paint brushes, characterised by a container (10) in which at least one cleaning brush or roller (24, 25) is mounted, an opening (14) for inserting a paint brush (48) to be cleaned, and means for rotating the cleaning brush or roller (24, 25) so as to clean a paint brush (48) when inserted through the opening (14) to contact the cleaning brush or roller (24, 25).
2. A cleaning apparatus for paint brushes as claimed in claim 1, characterised in that the means for rotating the cleaning brush or roller (24, 25) comprises an integral electric drive motor.
3. A cleaning apparatus for paint brushes as claimed in claim 1, characterised in that the means for rotating the cleaning brush (24, 25) comprises a handle (32) to rotate the cleaning brush or roller (24, 25) by hand.
4. A cleaning apparatus for paint brushes as claimed in claim 2, characterised in that the means for rotating the cleaning brush (24, 25) further comprises a coupling (36) to enable the cleaning brush or roller to be driven by an electric drill.
5. A cleaning apparatus for paint brushes as claimed in any preceding claim, characterised in that the container (10) is provided with a cover (12) having a slot (14) in it through which a paint brush (48) to be cleaned may be inserted.
6. A cleaning apparatus for paint brushes as claimed in any preceding claim, characterised in that the container (10) is arranged to contain a cleaning liquid to a level sufficient to immerse the cleaning brush or roller (24, 25) at least partly.

7. A cleaning apparatus for paint brushes as claimed in claim 6 characterised in that the container (10) is provided with a drain point (42) through which contaminated liquid can be drained.
8. A cleaning apparatus for paint brushes as claimed in any preceding claim, characterised in that two contra-rotating cleaning brushes or rollers (24, 25) are provided within the container (10) and the paint brush (48) to be cleaned is inserted into the nip between the two contra-rotating cleaning brushes or rollers (24, 25).
9. A cleaning apparatus for paint brushes as claimed in claims 1-7, characterised in that a single cleaning brush or roller (24, 25) is provided within the container (10) and the paint brush (48) to be cleaned is inserted between a reaction member and the cleaning brush or roller (24, 25).
10. A cleaning apparatus for paint brushes as claimed in any preceding claim, characterised in that the container includes a separate compartment (20) also for holding cleaning liquid, in which paint brushes (48) can soak.

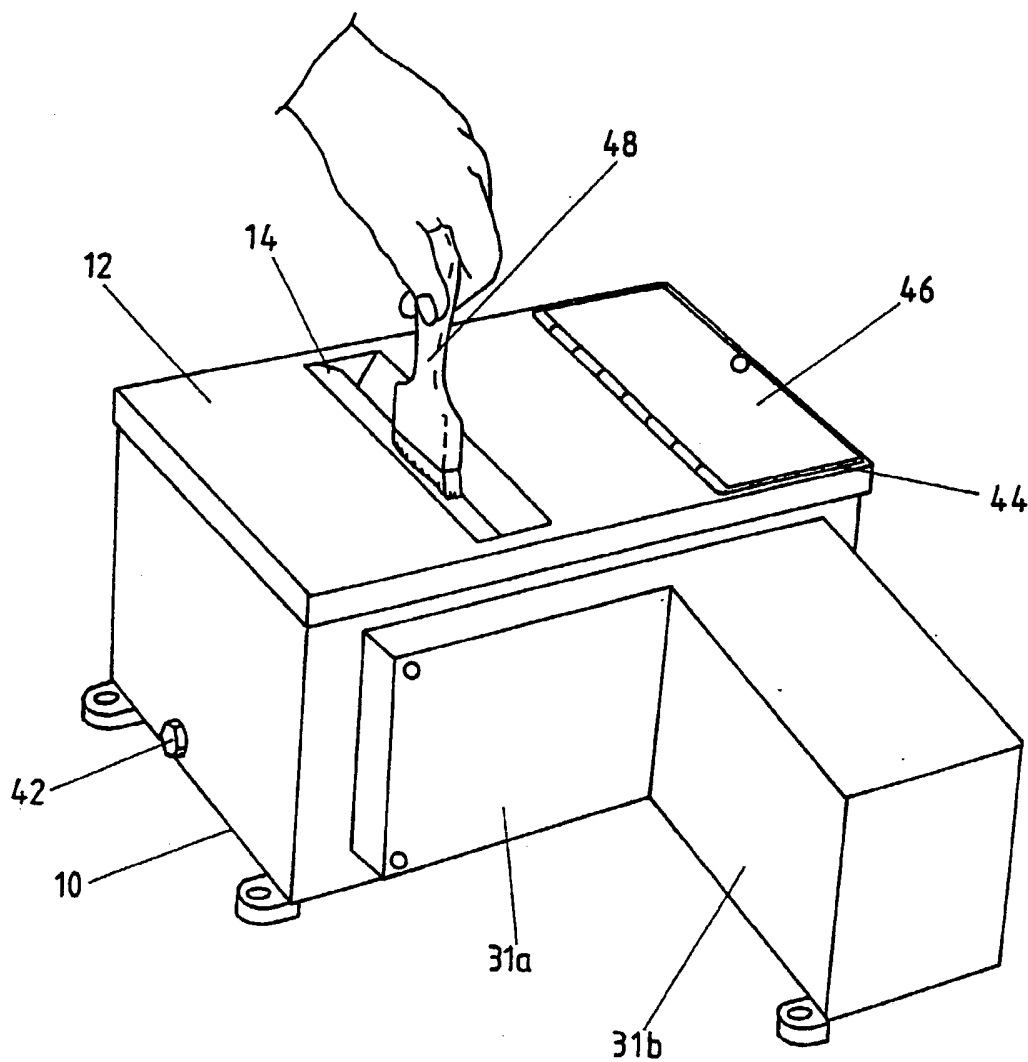


FIG. 1

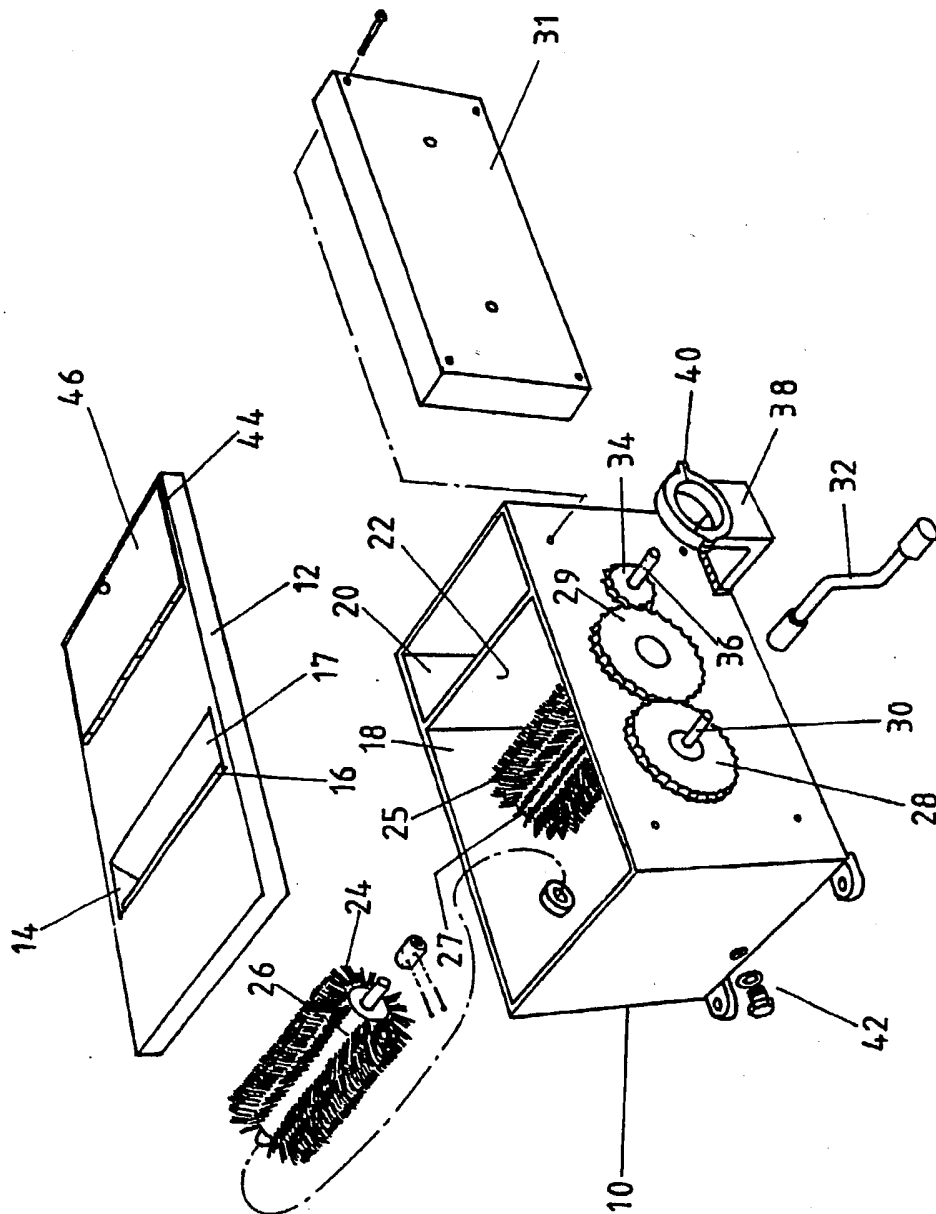



FIG. 2

INTERNATIONAL SEARCH REPORT

International Application No **PCT/GB 90/00578**

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) *		
According to International Patent Classification (IPC) or to both National Classification and IPC		
IPC ⁵ : B 44 D 3/00, A 46 B 17/06		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
IPC ⁵	B 44 D, A 46 B	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched *		
III. DOCUMENTS CONSIDERED TO BE RELEVANT *		
Category *	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
Y	DE, U, 8810864 (MESCHENMOSER K.) 24 November 1988 see page 2, whole page --	1,5,6
Y	US, A, 4320550 (J. MCGREW) 23 March 1982 see column 3, lines 3-28 --	1,5,6
A	US, A, 4308634 (A. EISENBERG) 5 January 1982 see column 4, lines 26-48 --	1
A	US, A, 3925908 (K.J. DUNN) 16 December 1975 see column 2, line 50 - column 3, line 5 -- ./.	1,4
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>* Special categories of cited documents: ¹⁰</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"D" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p> </div> </div>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
17th July 1990	27. 08. 90	
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III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category *	Citation of Document, " with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	US, A, 4607752 (L. SHERROW) 26 August 1986 see column 2, lines 43-67 --	1,7
A	DE, A, 3244557 (STRAHL G.) 7 June 1984 see claim 1 -----	1,10

**ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.**

GB 9000578

SA 36188

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 13/08/90
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE-U- 8810864	13-10-88	None	
US-A- 4320550	23-03-82	None	
US-A- 4308634	05-01-82	None	
US-A- 3925908	16-12-75	None	
US-A- 4607752	26-08-86	None	
DE-A- 3244557	07-06-84	None	